import java.awt.Container;

import java.awt.GridLayout;

import java.awt.event.ActionEvent;

import java.awt.event.ActionListener;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.ResultSet;

import java.sql.SQLException;

import java.sql.Statement;

import javax.swing.BoxLayout;

import javax.swing.JButton;

import javax.swing.JFrame;

import javax.swing.JLabel;

import javax.swing.JPanel;

import javax.swing.JTextField;

public class JDBCAllinone implements ActionListener {

JLabel lblFname,lblLname,lblAddress,lblSalary,lblf,lbll,lbla,lbls;

JLabel lblfVal,lbllVal,lblaVal,lblsVal;

JTextField txtFname,txtLname,txtAddress,txtSalary;

JButton btnInsert,btnUpdate,btnDelete,btnPrev,btnNext,btnClear;

ResultSet rs ;

public static void main(String[] args) {

JDBCAllinone obj = new JDBCAllinone();

obj.createUI();

}

private void createUI()

{

JFrame frame = new JFrame("JDBC All in One");

//Layout of Main Window

Container c = frame.getContentPane();

c.setLayout(new BoxLayout(c,BoxLayout.Y\_AXIS));

lblFname = new JLabel("First Name :");

lblLname = new JLabel("Last Name :");

lblAddress = new JLabel("Address :");

lblSalary = new JLabel("Salary :");

txtFname = new JTextField("",15);//To adjust width

txtLname = new JTextField();

txtAddress = new JTextField();

txtSalary = new JTextField();

JPanel pnlInput = new JPanel(new GridLayout(4,2));

pnlInput.add(lblFname);

pnlInput.add(txtFname);

pnlInput.add(lblLname);

pnlInput.add(txtLname);

pnlInput.add(lblAddress);

pnlInput.add(txtAddress);

pnlInput.add(lblSalary);

pnlInput.add(txtSalary);

btnInsert = new JButton("Insert");

btnInsert.addActionListener(this);

btnUpdate = new JButton("Update");

btnUpdate.addActionListener(this);

btnDelete = new JButton("Delete");

btnDelete.addActionListener(this);

btnClear = new JButton("Clear");

btnClear.addActionListener(this);

JPanel pnlButton = new JPanel(new GridLayout(1,4));

pnlButton.add(btnInsert);

pnlButton.add(btnUpdate);

pnlButton.add(btnDelete);

pnlButton.add(btnClear);

JPanel pnlAns = new JPanel(new GridLayout(4,2));

lblf = new JLabel("First Name :");

lbll = new JLabel("Last Name :");

lbla = new JLabel("Address :");

lbls = new JLabel("Salary :");

lblfVal = new JLabel("");

lbllVal = new JLabel("");

lblaVal = new JLabel("");

lblsVal = new JLabel("");

pnlAns.add(lblf);

pnlAns.add(lblfVal);

pnlAns.add(lbll);

pnlAns.add(lbllVal);

pnlAns.add(lbla);

pnlAns.add(lblaVal);

pnlAns.add(lbls);

pnlAns.add(lblsVal);

btnPrev = new JButton(" << ");

btnPrev.setActionCommand("Prev");

btnPrev.addActionListener(this);

btnNext = new JButton(" >> ");

btnNext.setActionCommand("Next");

btnNext.addActionListener(this);

JPanel pnlNavigate = new JPanel(new GridLayout(1,2));

pnlNavigate.add(btnPrev);

pnlNavigate.add(btnNext);

frame.add(pnlInput);

frame.add(pnlButton);

frame.add(pnlAns);

frame.add(pnlNavigate);

frame.pack();

frame.setVisible(true);

}

//@Override

public void actionPerformed(ActionEvent evt) {

String cmd = evt.getActionCommand();

if(cmd.equals("Insert"))

{

insertData();

}else if(cmd.equals("Update"))

{

updateData();

}else if(cmd.equals("Delete"))

{

deleteData();

}else if(cmd.equals("Prev"))

{

previous();

}else if(cmd.equals("Next"))

{

next();

}else if(cmd.equals("Clear"))

{

clearControls();

}

}

private void insertData()

{

Connection con;

try

{

Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

con = DriverManager.getConnection("jdbc:odbc:Emp");

String sql = "Insert Into Emp (FName,LName,Address,Salary) " +

"Values ('"+txtFname.getText()+"','"+txtLname.getText()

+"','"+txtAddress.getText()+"','"+txtSalary.getText()+"')";

Statement statement = con.createStatement();

statement.execute(sql);

createMessageBox("Inserted Successfully");

clearControls();

}

catch(Exception e)

{

createMessageBox(e.getMessage());

}

}

private void updateData()

{

Connection con;

try

{

Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

con = DriverManager.getConnection("jdbc:odbc:Emp");

String sql = "Update Emp Set LName='"+txtLname.getText()+"'," +

"Address='"+txtAddress.getText()+"',Salary='"+

txtSalary.getText()+"' Where FName='"+txtFname.getText()+"'";

Statement statement = con.createStatement();

statement.execute(sql);

createMessageBox("Updated Successfully");

clearControls();

}

catch(Exception e)

{

createMessageBox(e.getMessage());

}

}

private void deleteData()

{

Connection con;

try

{

Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

con = DriverManager.getConnection("jdbc:odbc:Emp");

String sql = "delete from Emp where FName = '"+txtFname.getText()+"'";

Statement statement = con.createStatement();

statement.execute(sql);

createMessageBox("Record of "+txtFname.getText()+" Deleted Successfully");

clearControls();

}

catch(Exception e)

{

createMessageBox(e.getMessage());

}

}

private void previous()

{

try

{

if(rs == null)

{

Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

Connection con = DriverManager.getConnection("jdbc:odbc:Emp");

String sql = "Select FName,LName,Address,Salary from Emp";

Statement statement = con.createStatement(ResultSet.TYPE\_SCROLL\_SENSITIVE,ResultSet.CONCUR\_UPDATABLE);

rs = statement.executeQuery(sql);

}

if(rs.previous())

{

populateControls();

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

private void next()

{

try

{

if(rs == null)

{

Class.forName("sun.jdbc.odbc.JdbcOdbcDriver");

Connection con = DriverManager.getConnection("jdbc:odbc:Emp");

String sql = "Select FName,LName,Address,Salary from Emp";

Statement statement = con.createStatement(ResultSet.TYPE\_SCROLL\_SENSITIVE,ResultSet.CONCUR\_READ\_ONLY);

rs = statement.executeQuery(sql);

}

if(rs.next() && !rs.isAfterLast())//After Last was giving invalid cursor state error

{

populateControls();

}

}

catch(Exception e)

{

e.printStackTrace();

}

}

private void createMessageBox(String msg)

{

JFrame frame = new JFrame("Result");

JLabel lbl = new JLabel(msg);

frame.add(lbl);

frame.setSize(200,200);

frame.setVisible(true);

}

private void clearControls()

{

String Empty = "";

txtFname.setText(Empty);

txtLname.setText(Empty);

txtAddress.setText(Empty);

txtSalary.setText(Empty);

lblfVal.setText(Empty);

lbllVal.setText(Empty);

lblaVal.setText(Empty);

lblsVal.setText(Empty);

}

private void populateControls()

{

try{

lblfVal.setText(rs.getString("fName"));

lbllVal.setText(rs.getString("lName"));

lblaVal.setText(rs.getString("Address"));

lblsVal.setText(rs.getString("Salary"));

txtFname.setText(lblfVal.getText());

txtLname.setText(lbllVal.getText());

txtAddress.setText(lblaVal.getText());

txtSalary.setText(lblsVal.getText());

}

catch(SQLException e)

{

e.printStackTrace();

}

}

}